Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of inserting a wave winding into a stator of a polyphase rotating electrical machine, the stator comprising:

(A) laminations with a hole through the center and having an axis of symmetry and

(B) slots ~~passing through~~ running axially ~~made in~~ along a radially inner face of the laminations, these slots providing a plurality of receiving positions arranged in tiers radially, and

(C) the winding comprising a plurality of phase windings each ~~consisting of~~ having an electrically conductive continuous wire,

the method comprising the following steps:

shaping each winding, the wire thereof being formed into a succession of crenellations connected by linking segments, each crenellation comprising two lateral branches facing one another each intended to be inserted at a receiving position of a slot, and a top branch connecting the two lateral branches;

placing the windings on an insertion tool;

inserting the ~~turns~~ windings into the slots of the stator,

~~characterized in that~~wherein the step of placing the windings is implemented on a cylindrical insertion tool, each winding constituting several turns around the insertion tool, these turns being superimposed in a given order,

and in that the windings are wound around the insertion tool at the same time, the turns that follow one another in said given winding order belonging alternately to the different windings;

and in that the windings comprise overhangs;

a) each of which runs from (i) a branch in one slot to (ii) another in another slot and runs along an axial end of the stator;

b) in which an overhang located at a radially inner position in a slot has a transverse height which is relatively small; and

c) in which an overhang located at a radially outer position in a slot has a transverse height which is relatively large.

2. (Currently Amended) The method according to Claim 1, ~~characterized in that~~wherein the step of inserting the turns into the slots of the stator is implemented in the reverse order to the winding order, the lateral branches of these turns progressively occupying radially more inner positions.

3. (Currently Amended) The method according to Claim 1, ~~characterized in that~~wherein the winding order comprises a succession of identical sequences, each sequence consisting of one turn of each winding.

4. (Currently Amended) The method according to Claim 1, ~~characterized in that~~wherein, on the insertion tool, the crenellations extend in respective planes parallel to the axis of symmetry of the insertion tool, or slightly inclined with respect to this axis.

5. (Currently Amended) The method according to Claim 1, ~~characterized in that~~wherein step 3) of inserting the windings into the slots is implemented by moving the insertion tool along the axis of symmetry of the stator.

6. (Currently Amended) The method according to Claim 1, ~~characterized in that~~wherein the top branches of the crenellations are curved and form a winding overhang on a first axial side of the stator.

7. (Currently Amended) The method according to Claim 6, ~~characterized in that~~ wherein the linking segments connect two respective lateral branches of two neighboring crenellations along the wire and have a curved shape, these segments forming a winding overhang on a second axial side of the stator opposite to the first.

8. (Currently Amended) The method according to Claim 7, ~~characterized in that~~ wherein the top branches and/or the linking segments formed at step 1) have increasing or decreasing heights along the windings.

9. (Currently Amended) The method according to Claim 8, ~~characterized in that~~ wherein the turns whose lateral branches are inserted in radially outer positions of bottoms of slots have top branches and/or linking segments with heights relatively greater than the turns whose lateral branches occupy radially inner positions.

10. (Currently Amended) The method according to Claim 1, ~~characterized in that~~ wherein it comprises, after step 3), a step 4) of shaping the winding overhangs by inclining the linking segments and/or the top branches towards the inside.

11. (Currently Amended) The method according to Claim 1, ~~characterized in that~~ wherein it comprises, after step 3), a step 4) of shaping the winding overhangs by inclining the linking segments and/or the top branches towards the outside.

12. (Currently Amended) The method according to Claim 1, ~~characterized in that~~ wherein it comprises, between steps 1) and 2), a step 1') of local shaping of the wire in areas of this wire intended to cross other wires, or other areas of the same wire, once the windings have been inserted into the stator.

13. (Currently Amended) The method according to Claim 1, ~~characterized in that~~ wherein the wire has a round cross-section, the slots having a circumferential width that is a multiple of the diameter of the wire.

14. (Currently Amended) The method according to Claim 13, ~~characterized in that~~ wherein the slots have a circumferential width corresponding to the diameter of the wire, the lateral branch occupying the radially most inner position being deformed by broadening in a circumferential direction so as to hold the lateral branches occupying the other positions inside the slot.

15. (Currently Amended) The method according to Claim 13, ~~characterized in that~~ wherein the slots have a circumferential width equal to at least two diameters of the wire and have on a radially inner side an opening partially closed on two opposite sides by two axial steps, the lateral branches occupying the slots being held inside it by a flat wedge resting on the steps on an inner side of the slot.

16 - 18. (Cancelled)

19. (New) A method of constructing a stator for use in an electrical machine, which has an axis of symmetry and end faces, comprising:

a) forming slots in the stator which extend axially;

b) positioning a first conductor such that

i) a first part rests in a first slot,

ii) a second part extends beyond an end face, forming a first overhang;

iii) a third part rests in a second slot and connects to the first overhang;

c) positioning a second conductor such that

i) a first part rests in a third slot,

ii) a second part extends beyond an end face, forming a second overhang;

iii) a third part rests in a fourth slot and connects to the second overhang;

in which the first overhang is located radially outward of the second overhang and a transverse height of the first overhang is different from transverse height of the second overhang to facilitate cooling said first and second conductors.

20. (New) A method of constructing a stator in an electrical machine, that has an axis of symmetry and end faces, said method comprising the steps of:

a) forming slots which run between the end faces;

b) placing wires in the slots, said wires extending beyond the end faces to form overhangs which do not constitute compact blocks of wires which oppose circulation of air.

21. (New) The method according to claim 20, in which wires in the overhangs are surrounded by ambient air along substantially their entire lengths.

22. (New) The method according to claim 20, in which overhangs are spaced apart from each other.

23. (New) The method according to claim 20, in which overhangs are spaced apart from all other overhangs, except where one overhang crosses another.

24. (New) The method according to claim 20, in which the stator is associated with a rotor which drives a cooling fan, and in which the overhangs comprise air flow apertures through which the fan drives cooling air which provides substantial cooling to all overhangs.

25. (New) The method according to claim 24, in which every overhang contacts at least one air flow aperture.

26. (New) The method according to claim 20, in which

c) a slot contains multiple wires, which may or may not be series-connected with each other, and

d) one of the wires is

i) located radially inward of all others in the slot,

ii) deformed so that it contacts two opposite faces of the slot, and locks the others in the slot.

27. (New) A method of constructing a stator in an electrical machine, which has (1) an axis of symmetry, (2) end faces, and (3) a first pair and a second pair of slots which extend between the end faces, comprising:

a) forming a first wire which

i) runs through one slot of the first pair,

ii) extends past an end face to form a first overhang, and

ii) then returns to the end face, and into a second slot of the first pair;

b) forming a second wire which

i) runs through one slot of the second pair,

ii) extends past an end face to form a second overhang, which is spaced from the first overhang, and

ii) then returns to the end face, and into a second slot of the second pair; and

c) at a crossing location where the first overhang crosses the second overhang, forming a deformation in either the first overhang, the second overhang, or both, which decreases space required by the crossing overhangs.

28. (New) A method of constructing an electrical machine, comprising:

a) forming a stator having end faces:

b) forming phase windings held in the stator which include overhangs which extend transversely from the end faces, in which

i) the overhangs are spaced from each other, except at crossing locations, and

ii) at crossing locations, one or more phase windings are flattened, to decrease space required by the crossing windings.

29. (New) The method according to claim 28, in which

c) wires forming the phase windings are held in radial slots in the stator;

d) multiple wires are contained in a single slot;

e) one of the wires in a slot is

i) located radially inward of the rest,

ii) deformed so that it contacts two opposite faces of the slot, and locks the rest in position.

30. (New) The method as in claim 29, in which a first overhang, which is located radially outward of a second overhang, has a larger transverse height than the second overhang.

31. (New) The method in claim 29, in which a first overhang, which is located radially outward of the second overhang, has a different transverse height than the second overhang.

32. (New) The method as in claim 29, in which overhangs are spaced apart from each other, except at crossings.

33. (New) The method as in claim 29, in which the overhangs do not constitute compact blocks of wires which oppose circulation of air.

34. (New) The method as in claim 29, in which wires in the overhangs are surrounded by ambient air along substantially their entire lengths.

35. (New) The method as in claim 19, in which said first overhang, which is located radially outward of said second overhang, has a larger transverse height than said second overhang.